
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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COBALT IN JULY 1997

U.S. consumption of cobalt during January through July 1997 was 10% higher than consumption during the first 7 months of 1996. U.S. imports of cobalt metal and cobalt contained in chemicals during January through June 1997 were 23% higher than imports during the first 6 months of 1996. Exports of unwrought cobalt and cobalt contained in chemicals were 15% lower during January through June 1997 than exports during the same period in 1996. Trade data for July 1997 will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

New Publication

The 1996 cobalt Annual Review is now available. To retrieve this report from MINES FaxBack, call (703) 648-4999 from the phone attached to your fax machine and request

document number 210496. To retrieve the report from the World Wide Web, go to the Minerals Information home page (<http://minerals.er.usgs.gov/minerals>), then find "Minerals Yearbook" by looking under either "Products" or "Commodity." The Adobe Acrobat software necessary to read the file can be downloaded from the home page.

Update

On September 16, the Defense Logistics Agency (DLA) announced its cobalt sales plan for fiscal year 1998 (October 1, 1997, through September 30, 1998). The DLA plans to offer approximately 227 tons (500,000 pounds) of contained cobalt on the third Wednesday of each month on a sealed bid basis. The cobalt being offered will be sampled and analyzed. The results of the analyses will be published in the invitation for bids, which is scheduled to be issued on September 30. Awards will be made based on price alone. For further information on DLA's cobalt sales program, please contact June Olmstead, DLA's contracting officer for cobalt, at (703) 767-6500.

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
1996:				
January-July r/	1,880	951	901	3,740
January-December 4/	3,240	1,610	1,660	6,500
Year 5/	3,640	1,710	1,670	7,010
1997:				
January	303	140	163	606
February	287	134	165	587
March	275	133	171	579
April	303	132	173	608
May	296	128	174	598
June	266	126	174	566
July	273	128	172	574
January-July	2,000	921	1,190	4,120

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

5/ Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	1996			1997	
	January- July	January- December 2/	Year 3/	July	January- July
Steel:					
Stainless and heat resisting	23	38	38	3	22
Tool	58	95	95	6	65
Superalloys	1,620 r/	2,910	3,220	286	2,000
Alloys (excludes steels and superalloys):					
Magnetic alloys	405 r/	682	728	55	400
Welding materials (structural and hard-facing) 4/	156 r/	268	284	26	187
Other alloys 5/	26 r/	45	65	W	W
Cemented carbides 6/	426 r/	721	722	56	418
Chemical and ceramic uses:					
Catalysts	379 r/	638	652	49	355
Driers in paints or related usage	438 r/	733	733	59	409
Ground coat frit	96 r/	159	159	13	97
Pigments	W	W	191	W	W
Miscellaneous and unspecified 7/	114 r/	211	119	21	160
Total	3,740 r/	6,500	7,010	574	4,120

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ Includes annual reports.

4/ Includes wear-resistant alloys.

5/ Includes nonferrous alloys.

6/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

7/ Includes feed or nutritive additive, full-alloy steel, glass decolorizer, mill products made from metal powder, and data indicated by the symbol "W."

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

	Industry 2/				U.S. Government, 3/ Metal
	Metal 4/	Oxide and other chemical compounds 5/	Scrap	Total	
1996:					
July	246 r/	715 r/	117 r/	1,080 r/	19,500
August	361 r/	442 r/	115 r/	919 r/	19,300
September	333 r/	326	116 r/	774 r/	19,000
October	288 r/	275	111 r/	675 r/	18,900
November	292 r/	280	114 r/	685 r/	18,800
December 6/	284 r/	272 r/	181 r/	737 r/	18,700
Yearend 7/	305	275	182	762	18,700
1997:					
January	337	281	101	719	18,500
February	303	270	92	665	18,400
March	328	252	118	698	18,300
April	367	252	88	707	17,900
May	384	239	83	706	17,800
June	368	241	85	694	17,800
July	380	240	93	714	17,800

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Data from Defense Logistics Agency. Includes material committed for sale pending shipment.

4/ Includes metal powder.

5/ Data may include other cobalt materials.

6/ Data based on monthly reports.

7/ Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
June	600,000	\$36,100,000	82,200	\$3,710,000	88,800	\$1,170,000	682,000	3,530,000
July	590,000	34,800,000	93,900	4,440,000	60,200	778,000	674,000	4,200,000
August	480,000	24,800,000	51,900	2,010,000	38,600	405,000	528,000	4,730,000
September	434,000	20,600,000	58,600	2,440,000	101,000	954,000	503,000	5,240,000
October	347,000	17,100,000	71,000	3,030,000	101,000	1,010,000	425,000	5,660,000
November	481,000	22,300,000	61,100	2,640,000	90,700	911,000	550,000	6,210,000
December	400,000	19,400,000	64,100	2,400,000	155,000	1,340,000	494,000	6,710,000
January-December	5,760,000	327,000,000	824,000	36,200,000	1,260,000	14,800,000	6,710,000	XX
1997:								
January	629,000 7/	28,400,000 7/	85,900	3,080,000	182,000 7/	1,470,000 7/	746,000	746,000
February	567,000	24,300,000	56,900 7/	1,690,000 7/	157,000	1,540,000	649,000	1,400,000
March	524,000 7/	22,800,000 7/	72,200	3,250,000	65,000 7/	519,000 7/	594,000	1,990,000
April	770,000	32,900,000	104,000	4,190,000	203,000	1,910,000	899,000	2,890,000
May	634,000	31,100,000	63,200 7/	2,100,000 7/	250,000	2,270,000	746,000	3,640,000
June:								
Belgium	10,600	770,000	42,600	1,500,000	18,100	281,000	45,900	189,000
Brazil	--	--	--	--	--	--	--	89,100
Canada	100,000	4,850,000	--	--	2,310	59,200	101,000	555,000
China	1	3,640	--	--	--	--	1	1
Finland	65,400	2,970,000	49,000	1,640,000	114,000	1,080,000	131,000	788,000
France	11,000 7/	416,000 7/	2,500	151,000	--	--	12,800	43,600
Germany	13,400	943,000	--	--	--	--	13,400	40,500
India	--	--	--	--	14	3,130	4	4
Japan	--	--	499	48,300	--	--	359	5,560
Mexico	--	--	--	--	--	--	--	1,680
Morocco	11,700	529,000	--	--	--	--	11,700	11,700
Netherlands	--	--	--	--	--	--	--	8,640
Norway	181,000	9,580,000	--	--	--	--	181,000	1,090,000
Russia	68,400	3,160,000	--	--	--	--	68,400	432,000
South Africa	1,000	45,200	--	--	--	--	1,000	24,700
Spain	--	--	--	--	--	--	--	15,700
United Kingdom	2,000	106,000	29,000	1,420,000	3,840	52,100	23,900	119,000
Zaire	12,700	550,000	--	--	--	--	12,700	330,000
Zambia	107,000	4,920,000	--	--	--	--	107,000	603,000
Total	584,000	28,800,000	124,000	4,760,000	139,000	1,470,000	711,000	4,350,000

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt sulfates, cobalt chlorides, cobalt carbonates, and cobalt acetates.

4/ Customs value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1996:						
June	2,630	\$108,000	17,400	\$292,000	13,800	\$1,070,000
July	4,540	345,000	51,000	943,000	12,300	868,000
August	8,080	313,000	84,600	2,020,000	10,500	676,000
September	2,500	237,000	14,900	765,000	12,500	878,000
October	483	34,100	47,900	644,000	17,500	1,020,000
November	17,500	946,000	20,400	552,000	9,680	714,000
December	3,560	207,000	55,300	2,270,000	15,300	1,100,000
January-December	60,500	3,790,000	566,000	11,700,000	178,000	11,500,000
1997:						
January	5,920	443,000	32,800 4/	1,070,000 4/	14,500	876,000
February	12,400	497,000	38,100 4/	1,280,000 4/	14,100	958,000
March	2,350	181,000	29,500 4/	1,170,000 4/	39,100	1,380,000
April	8,450	418,000	73,400	1,950,000	24,800	1,530,000
May	24,400	955,000	50,700 4/	1,320,000 4/	29,300	1,470,000
June:						
Belgium	725	24,800	8,000 4/	429,000 4/	12	6,200
Canada	21	4,200	3,490	18,700	851	116,000
Denmark	55	7,820	--	--	--	--
Finland	--	--	12,000 4/	721,000 4/	--	--
France	--	--	2,420 4/	86,600 4/	--	--
Germany	200	16,700	487 4/	37,100 4/	2,460	133,000
Japan	445	25,000	3,920	53,100	5,020	362,000
South Africa	--	--	18,700	374,000	--	--
Sweden	706	33,700	1,180	8,760	--	--
United Kingdom	80	16,200	6,030	109,000	6,600	380,000
Total	2,230	128,000	56,200	1,840,000	14,900	997,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
June	159,000	\$7,500,000	13,300	\$514,000	20,600	\$310,000	173,000	986,000
July	64,300	2,870,000	24,100	575,000	27,200	271,000	88,200	1,070,000
August	88,700	3,160,000	7,970	277,000	26,600	292,000	101,000	1,170,000
September	58,200	2,370,000	35,600	1,060,000	42,800	224,000	94,200	1,270,000
October	73,100	3,390,000	25,700	790,000	31,900	104,000	99,300	1,370,000
November	84,000	3,510,000	27,400	777,000	78,100	316,000	122,000	1,490,000
December	118,000	3,930,000	54,400	1,440,000	112,000	678,000	184,000	1,670,000
January-December	1,320,000	66,100,000	346,000	10,200,000	446,000	4,050,000	1,670,000	XX
1997:								
January	60,800	2,350,000	30,300	979,000	34,100 7/	149,000 7/	90,700	90,700
February	101,000	2,480,000	48,100 7/	1,160,000 7/	65,500 7/	234,000 7/	152,000	242,000
March	82,000	3,990,000	50,100	1,530,000	18,500	253,000	123,000	365,000
April	143,000	5,760,000	93,100 7/	2,140,000 7/	5,430	74,100	211,000	576,000
May	77,100	3,990,000	35,600 7/	802,000 7/	65,800	428,000	118,000	695,000
June	82,900	3,760,000	56,200 7/	1,660,000 7/	75,000 7/	246,000 7/	141,000	836,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
1996:				
June	62,000	\$2,150,000	--	--
July	28,500	1,170,000	3,500	\$162,000
August	67,100	1,660,000	43,500	1,050,000
September	31,000	1,780,000	56,200	2,250,000
October	20,600	1,420,000	--	--
November	108,000	2,610,000	8,790	370,000
December	88,900	4,080,000	--	--
January-December	532,000	23,600,000	154,000	4,560,000
1997:				
January	44,300	3,020,000	24,600 3/	1,000,000 3/
February	20,900	1,420,000	80,500 3/	750,000 3/
March	68,200	3,720,000	12,200 3/	145,000 3/
April	66,100	2,590,000	300 3/	7,390 3/
May	187,000	8,410,000	2,510 3/	56,500 3/
June	76,800	2,780,000	9,400 3/	651,000 3/

1/ Data are rounded to three significant digits.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.